SIG 316

*TB SIG 316

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

INSTRUCTIONS FOR INSTALLATION OF MODIFICATION KIT, ELECTRONIC EQUIPMENT MK–345/GR, IN 2½-TON, 6X6 TRUCK-MOUNTED, SIGNAL CORPS REPAIR SHOPS M185 AND M238

Headquarters, Department of the Army, Washington 25, D. C., 12 July, 1960

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1. General. *a.* This bulletin is to be used as a guide for personnel responsible for the installation of Modification Kit, Electronic Equipment MK–345/GR; Radio Kit MX-49/MRM; and Power Supply PP–1104A/G, in 2½-ton, 6 x 6, truck-mounted, Signal Corps Repair Shops M185 and M238.

b. These instructions can be followed as prescribed in most instances. Vehicles and equipment of different manufacturers may require minor changes to these instructions.

c. Vehicle batteries should be disconnected before the actual wiring is begun. Avoid damaging *between-wall wiring* when cutting holes in the body.

d. All conduit is thin-walled, electrical metallic tubing. This type does not require threading, it is fastened to electrical boxes and condulets by means of box connectors. Locknuts are required with box connectors only when attaching conduit to sheet-metal boxes. Electrical boxes, condulets, and conduit should be firmly secured so that no mechanical strain is imposed on connectors.

2. Power Supply. Two Power Supplies PP–1104A/G are required to furnish dc power. They are mounted on the truck floor; one under the front end of the right-hand workbench, and the other one under the front of the left-hand workbench.

*This bulletin supersedes TB SIG 316, 8 November 1957.

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3. Installation of Test-Instrument Shelf. *a. Material Required (Part of MK–845/GR* (fig. 1).

Description	Quantity
Shelf, assy	1
Bolt, ⅜–24 NF–2 x 3½ in. long	3
Bolt, ½–20 NF–2 x 3½ in. long	3
Nut, ⅜–24 NF–2	3
Nut, ½–20 NF–2	3
Lockwasher ⅜-in. ID	3
Lockwasher ½-in. ID	3
Washer, plain, ⅜-in. ID	3
Washer, plain, ½-in. ID	3
Cement, Minnesota Mining EC–711 or equal	1 tube

b. Description (fig. 2). The test-instrument shelf is felt-covered, mounted on shock-insulating pads on three triangular brackets, and is attached to the curbside wall of the van body. Spacing of brackets as originally assembled may not be correct for this installation; therefore, the shock-insulating pads may require repositioning.

c. Mounting.

(1) Loosen the felt covering on the shelf enough to remove the shock-insulating-pad bolts that hold the pads to the shelf. The pads will remain on the brackets.

(2) Remove and discard the ⅜-inch bolts that pass through the bench-top angle brackets immediately in the rear of each window on the curbside of the van body. Drive the bolts outward to the outside of the van body.

(3) Install three new ⅜–24 by 3½-inch long hexagonal-head bolts (fig. 2) and ⅜-inch plain washers with the heads of the bolts outside of van body.

(4) Mount the three triangular brackets on these bolts by using the bottom hole in each bracket, and tighten sufficiently with ⅜-inch ID lockwashers and ⅜–24 NF–2 nuts to hold the brackets in place.

(5) With the brackets mounted vertically, and with the top surfaces in the same horizontal plane, scribe through the upperholes in the brackets. Move the brackets away and drill three ½-inch holes through the side of the van body.

(6) Return the brackets to position and install three ½–20 by 3½-inch long bolts (heads outside), ½-inch inside diameter plain washer (under heads), ½-inch inside diameter lockwashers, and ½–20 NF–2 nuts. Tighten all nuts securely and paint all boltheads.

(7) Place the shelf on the shock pads, and mark the locations of the pad-bolt holes on the bottom of the shelf.

(8) Loosen the felt covering as necessary and drill holes as marked. Mount the shelf as before, and install the bolts originally used to retain the pads, with the heads on top.

(9) Fasten the felt covering smoothly in place with cement, EC–711 or equal.

4. Alteration of Window Latches. *a. General.*

(1) Placing the test-instrument shelf close to the windows prevents latching the windows closed as originally designed. Therefore, the latching devices must be modified.

(2) The latch pin in the spring-loaded window latch must be altered. Drill an additional cotter-pin hole to permit the latch bar to rise ¼-inch higher. The notch in the latch bar (fig. 1) must be lengthened at the pivot end to permit securing the window.

b. Material Required (Part of Modification Kit, Electronic Equipment MK–845/GR).

Description	Quantity
Hook, latch bar (fig. 4)	3
Tee nut, ¼–20 NC–2	3
Screw, machine, ¼–20 NC–2 x ⅞ in. long	3
Lockwasher, std, ¼-in. ID	3
Pin, cotter, split, ⅛ x 1 in. long	3

c. Alteration and Installation of Latching Device.

(1) Reposition the spring retaining cotter pin ¼-inch lower on the spring-loaded window latch to permit the latch bar to rise ¼-inch higher.

(2) Lengthen the notch of the latch bar (fig. 1) to a depth of 1⅛-inches at the pivot end, to permit securing the window in the closed position. By pulling the bar until the window is tightly closed, alteration of the latch bar and pin will permit the latch pin to rise and engage notch.

(3) A latching ring (fig. 1), on the outer end of the latch bar, is provided to retain the bar in place against the bottom of the test-instrument shelf. A suitable hook (fig. 4) is provided for retaining the latch bar in position on the underside of shelf.

(4) Install the hook by using one ¼–20 NC–2 by ⅞-inch long screw, standard ¼-inch inside diameter lockwasher, ¼–20 NC–2 nut, and ¼–20 NC–2 tee nut.

5. Removal of Shelves from Right-Hand and Left-Hand Workbenches. To mount Power Supplies PP–1104A/G on the truck floor, first remove the shelves under the front end of the benches. Use a 7/16-inch end wrench and short screwdriver to remove the screws that hold the shelves in place. Remove the shelves and store under the benches.

6. Installation of Outlet Boxes for Ac Power to Power Supplies PP–1104A/G and Hookup of Outlet Boxes to Ac Power (fig. 1).

a. Material Required.

(1) *For outlet boxes.*

Description	Quantity
Outlet boxes, steel, galv, 4 in.	2
Tubing, electrical, metallic, ½ in.	34 inches
Connectors, ½ in.	3
Locknuts, ½ in.	6
Flush-range receptacle; Rodale Mfg. Co. No. 549.	2
Flush receptacle plate, Rodale Mfg. Co. No. 550.	2
Plaster rings, 4-in. box, Rodale Mfg. Co. No. 556.	2
Screw, tapping, RH steel, No. 8, ½ in. long	4

(2) *For Hookup of outlet boxes to ac power.*

Description	Quantity
Flexible, conduit, ¾ in.	36 inches
Connector, ¾ in.	1
Wire, insulated, stranded, No. 6 AWG	144 inches
Wire, insulated, stranded, No. 10 AWG	180 inches

b. Mounting Outlet Boxes.

(1) Place outlet boxes on the front wall of the truck body between the right and left benches, and 2-inches below the existing wire mold. Determine the location of the uprights in the front wall of the body. (They are spaced 39⅛ inches apart, 19 9/16 inches each side of centerline of the body.) Place the outlet box on the location and mark the location of the holes in the bottom of the outlet box on the right and left uprights. Use a No. 29 drill to drill holes in the right and left uprights. Fasten the outlet boxes to the front wall of the body with two No. 8 RH, ½-inch steel screws.

(2) Connect the outlet boxes together with the 34-inch length of ½-inch electrical metallic tubing; use connectors and locknuts.

(3) Install the ¾-inch connector in the right side of the right-hand outlet box.

(4) Locate a point on the right-hand bench, 19¼ inches back from front edge and 2½ inches from the front end of the bench. Bore a 1¼-inch hole through the bench at this point.

(5) Run a 36-inch length of ¾-inch flexible conduit through the 1¼-inch hole in the right-hand bench, connect it to the right-hand outlet box, and to the lower right-hand corner of the main switchbox located on the front wall of the truck.

(6) Run three lengths of wire No. 6 AWG, insulated, each 48 inches long, through the flexible conduit from the right-hand outlet box to the main switchbox.

(7) Run three lengths of wire No. 10 AWG, insulated, each 59 inches long, through the conduit (electrical metallic tubing) that connects the left- and right-hand outlet boxes. Connect the wires to the receptacles; maintain polarity throughout (from the main switchbox to the right and left receptacles).

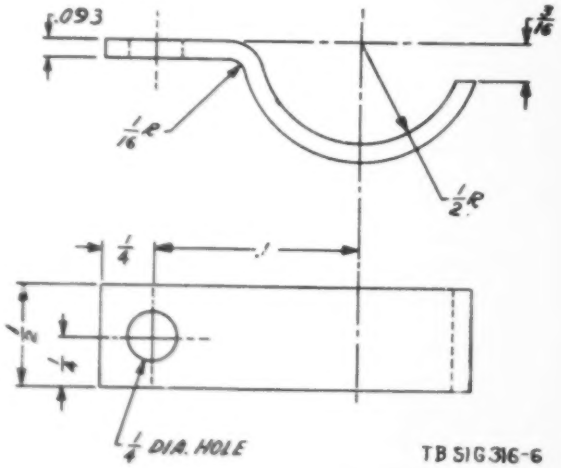


Figure 4. Latch bar hook.

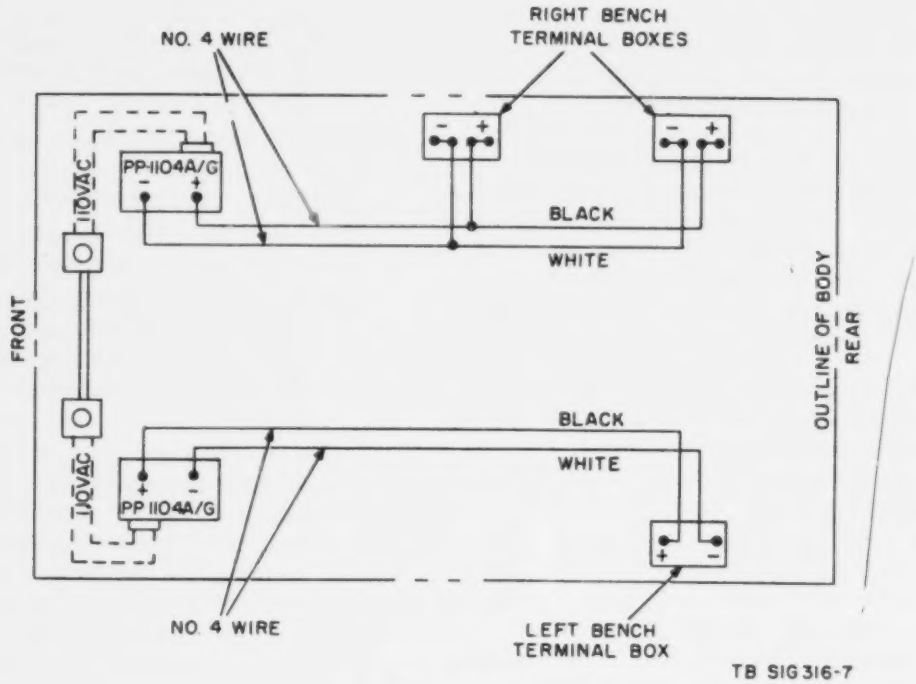


Figure 5. Dc wiring diagram.

7. Low-Voltage Direct Current to Right-Hand and Left-Hand Workbenches (fig. 5).

a. Material Required for Each Bench.

Description	Quantity
Connector, straight, 1 in	1
Flexible conduit, 1 in	67 inches
Locknut, conduit, 1 in	2
Wire, insulated, No. 4 AWG	34 ft

b. Right-Hand Workbench.

(1) Remove the four wires from the existing terminal boxes, electrical metallic tubing, and condulet mounted on the right-hand workbench.

(2) Locate a point on the right-hand bench 21½ inches back from the front edge and 3¼ inches from the front end of the bench. Bore a 2¼ inch hole through the bench at this point.

(3) Run two 17-foot lengths of insulated No. 4 AWG wire, and feed them through the condulet and electrical metallic tubing to the terminal boxes. Secure the wires in the terminal boxes.

(4) Pass the two No. 4 AWG wires which extend from the condulet through 67 inches of 1-inch flexible conduit. Pass the conduit up through the 2¼-inch hole in the workbench and connect it to the condulet.

c. Left-Hand Workbench (fig. 5).

(1) Remove the four wires from the existing terminal box, electrical metallic tubing, and condulet.

(2) Locate a point on the left-hand bench 21½ inches back from the front edge and 3¼ inches from the front end of the bench. Bore a 2¼-inch hole through the bench.

(3) Run two 17-foot lengths of wire, insulated, No. 4 AWG through the condulet and electrical metallic tubing to the terminal box. Secure the wires in the terminal box.

(4) Pass the two No. 4 AWG wires which extend from the condulet through 67 inches of 1-inch flexible conduit. Pass the conduit up through the 2¼-inch hole in the workbench and connect it to the condulet.

8. Installation of Holddown Brackets. *a. Material Required for Each.* Refer to the legend in figure 6.

b. Fabrication of Parts. Fabricate right-hand and left-hand holddown brackets as shown in figure 6.

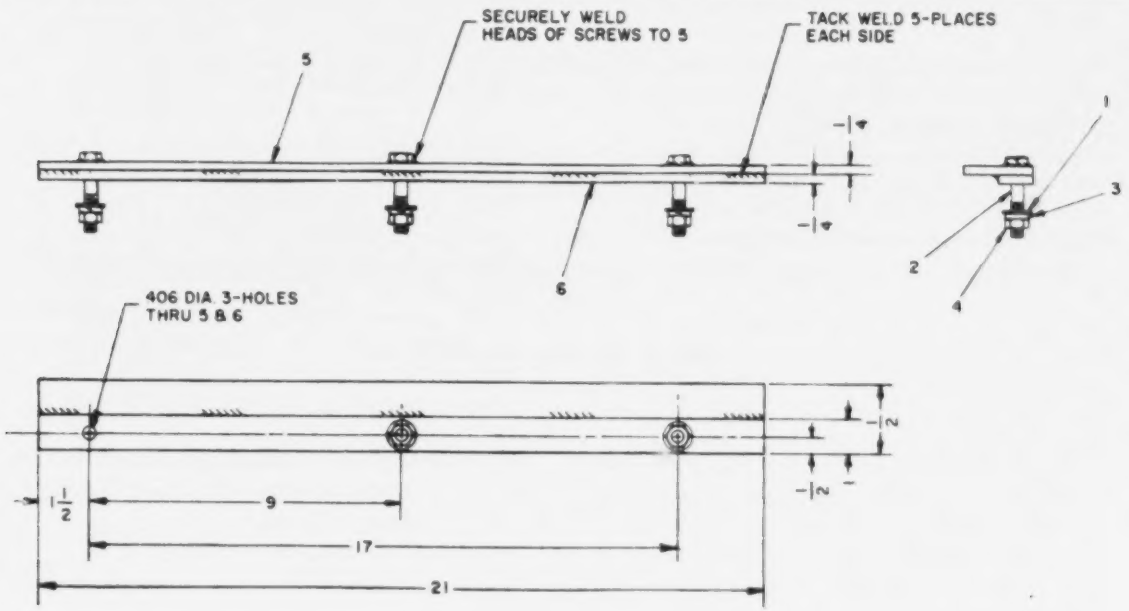
c. Locating Power Supply Holddown Bracket, Right-hand. Take the right-hand holddown bracket and hold with the bolts pointed down on the truck floor near the front right-hand corner underneath the workbench. Locate the back of the bracket 2 inches in from the curbside wall and the left end of the bracket 4¾ inches back from the front wall. Scribe the location of the three bolts on the floor of the truck. Use a ⅜-inch drill to drill the three holes at the locations marked. After drilling the holes, place the bracket in place and secure to the truck floor with ⅜–16 hexagonal nuts and ⅜-inch inside diameter washers.

d. Locating Power Supply Holddown Bracket, Left-Hand. Take left-hand holddown bracket and hold with the bolts pointed down on the truck floor near the front left-hand corner underneath the workbench. Locate the back of the bracket 2 inches in from the roadside wall and the right end of the bracket 4¾ inches back from the front wall. Scribe the location of the three bolts on the floor of the truck. Use a ⅜-inch drill and drill the three holes at the locations marked. After drilling the holes, place the bracket in place and secure to the truck floor with ⅜–16 hexagonal nuts and ⅜-inch inside diameter washers.

9. Mounting Footings on Right-Hand and Left-Hand Power Supplies PP–1104A/G *a. General.* When installing Power Supply PP–1104A/G in the maintenance van, mount the footings on the front and rear of the power supply so that it can be secured to the floor of the van.

b. Material Required (figs. 7 and 8).

Description	Quantity
Iron, angle, 2 x 2 x ¼ x 21 in. lg pieces	4
Bolt, machine, steel, ¼–20, NF–2, ¾ in. lg	16
Nut, hexagonal, ¼–20	16
Lockwasher, steel, split, ¼ ID	16
Washer, plain, steel, ¼ ID	16



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1 Washer, flat, steel, ⅜-inch inside diameter (3)
2 Bolt hexagon-head, steel, ⅜–16 x 2½-inches long (3)
3 Lockwasher, steel, ⅜-inch inside diameter (3)
4 Nut, hexagonal, steel, ⅜–16 (3)
5 Steel, flat, 21 inches long x 1 inch wide x ¼-inch thick (1)
6 Steel, flat, 21 inches long x 2 inches wide x ¼-inch thick (1)

Figure 6. Bracket assembly.

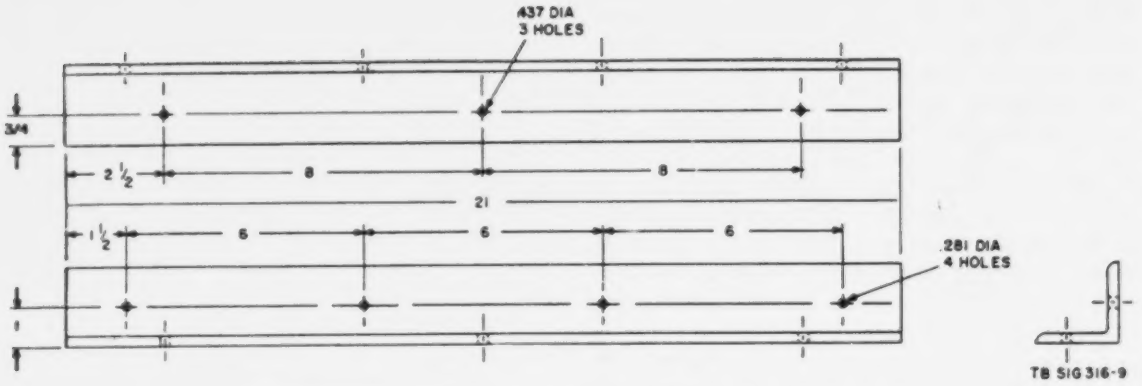


Figure 7. Front angle iron footing.

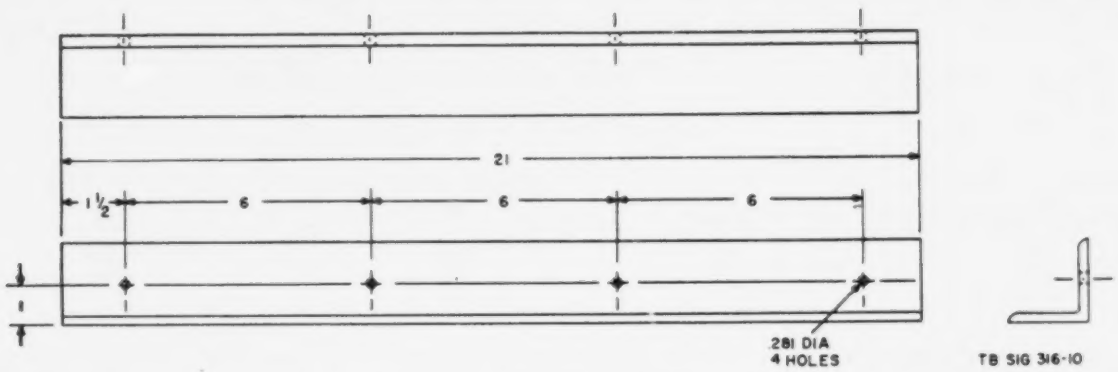


Figure 8. Rear angle iron footing.

(1) Place the rear angle iron footing on the floor against the rear of the power supply flush with each end. On the power supply, mark the location of the four mounting holes in the footing.

(2) Place the front angle iron footing on the floor against the front of the power supply flush with each end. On the power supply, mark the location of the four mounting holes in the footing.

(3) Use a ¼-inch drill to drill holes through the bottom frame of the power supply at the locations marked. Secure the front and rear footings to the power supply; use ¼–20 machine bolts, nuts, and washers.

10. Mounting and Connecting Right-Hand and Left-Hand Power Supplies PP–1104A/G (fig. 1).

a. Material Required for Each.

Description	Quantity
Bolt, hexagonal-head, steel, ⅜–16 x 2½-in. lg.	3
Nut, hexagonal steel ⅜–16	3
Washer, flat, steel, ⅜-in. ID	3
Lockwasher, steel, split, ⅜-in. ID	3
Connector, right angle, (1-inch flexible conduit).	1
Screw, sheet-metal, No. 8 x 1 in. lg	1
Lug, spade, copper, ⅜-inch hole	2
Power cord, 3 cord, w/lugs and connector attached, 6 ft long, Rodale Mfg. Co. Inc., No. 546, or equal.	1

b. Mounting and Connecting Right-Hand Power Supply.

(1) Attach the 6-foot power cord to the terminal block inside Power Supply PP–1104A/G.

(2) Drill a hole in the back part of the right angle connector to accept a No. 8 metal screw.

(3) Remove the No. 8 metal screw from the lower right-hand corner of the PP–1104A/G.

(4) Thread the two No. 4 AWG wires leading to the junction boxes on the right-hand bench through the right angle connector. Connect the connector to the flexible conduit. Insert the No. 8 metal screw, in the hole in the back part of the angle connector and secure the connector to the power supply where the No. 8 screw was removed.

(5) Slide the power supply toward the curbside wall of the truck until the rear angle iron footing of the power supply engages the holddown bracket. Position the power supply so that it is flush with both ends of the holddown bracket.

(6) Locate three positions on the front angle iron footing of the power supply. Locate the first 1½ inches from the left end; locate the second 10½ inches from the left end; locate the third 2½ inches from the right end. Use a ⅜-inch drill to drill the three holes at the locations marked. Drill through the angle iron footing and through the truck floor. Use the ⅜–16 by 2½ inches long hexagonal-head bolts, hexagonal nuts, plain washers, and lockwashers and secure the power supply to the floor.

(7) Cut the two No. 4 AWG wires which extend from the angle connector fastened to the lower right corner of the power supply to proper length for connection to the output terminals on the lower front of the power supply. Solder the terminals to the ends of the two No. 4 AWG wires and connect the wires to the output terminals of the power supply. Be sure to maintain polarity with the terminals in the junction boxes on the right-hand workbench.

(8) Connect the 6 foot power cord to the power supply and plug into the right-hand ac power receptacle.

c. Mounting and Connecting Left-Hand Power Supply.

(1) Attach the 6-foot power cord to the terminal block inside the power supply.

(2) Drill a hole in back part of the right angle connector to accept a No. 8 metal screw.

(3) Remove the No. 8 metal screw from the lower left-hand corner of the PP–1104A/G.

(4) Thread the two No. 4 AWG wires leading to the junction box on the left-hand bench through the right angle connector. Connect the connector to the flexible conduit. Insert the No. 8 metal screw in the drilled hole in the back part of the angle connector and secure the connector to the power supply where the No. 8 screw was removed.

(5) Slide the power supply toward the roadside wall of the truck until the rear angle iron footing of the power supply engages the holddown bracket. Position the power supply so that it is flush with both ends of the holddown bracket.

(6) Locate three positions on the front angle iron footing of the power supply. Locate the first 1½ inches from the right end; locate the second 10½ inches from the right end; locate the third 2½ inches from the left end. Use a ⅜-inch drill to drill the three holes at the positions marked. Drill through the angle iron footing through the truck floor. Use the ⅜–16 by 2½ inches long, hexagonal-head bolts, hexagonal nuts, plain washers, and lockwashers and secure the power supply to the floor.

(7) Cut the No. 4 AWG wires, which extend from the angle connector fastened to the lower left-hand corner of the power supply to proper length for connection to the output terminals on the lower front of the power supply. Solder the terminals to the ends of the two No. 4 AWG wires and connect the wires to the output terminals of the power supply. Be sure to maintain polarity with the terminals in the junction box on the left bench.

(8) Connect the 6-foot power cord to the power supply and plug into the left-hand ac power receptacle.

11. Electrical System, 100 Amperes at 14 Volts and 50 Amperes at 28 Volts. *a.* Selenium rectifiers re-

ceive power through the 110-volt ac input receptacles on the front wall of the truck body.

b. From the right-side power supply, a 1-inch conduit containing two No. 4 AWG wires leads to the two terminal boxes on top of the right cabinet bench.

c. From the left-side power supply, a 1-inch conduit containing two No. 4 AWG wires leads to the terminal box on top of the left cabinet bench.

d. The right- and left-side power supplies can be operated independently of each other. While one is supplying power of 11.5 to 17.5 volts dc, the other can be supplying power of 23 to 32 volts dc or can be shut off.

e. Three wires lead from the power unit exterior six-wire socket to the remote control switch for starting the power unit engine from within the body. The center tap of the remote control switch is grounded to the six-wire socket body.

f. To install the wiring and conduits, follow the instructions in (1) through (5) below.

(1) All wire connections made by splicing must be soldered and taped. Rosin-core solder is used to prevent corrosion of soldered electrical connections.

(2) Electrical boxes and condulets made by various manufacturers may vary in dimensions. Therefore, the relative positions of such items are represented by positive measurements where actual lengths of conduits are not given. Thin-walled conduit may be measured and cut easily to the required length.

(3) Ends of nipples and box connectors projecting into electrical boxes must be secured by locknuts. The threads of nipples should be protected by conduit bushings. These protect the insulation of the wire from being cut by sharp edges.

(4) When installing wires in conduits, a piece of piano wire may be used. Pass a suitable length of piano wire through the conduit between connection points. On corner condulets, loop the wire outside before changing direction. Attach all wires to be installed by skinning ends and binding them to the piano wire with tape. Coat the wires with powdered talcum (soapstone) to assure easy passage as the wire is pulled through. Feed the wires into the conduit. Leave a length of piano wire in position when it is known that additional wiring must later be installed.

(5) Wires visible in corner condulets must be loose in conduits after completion of wiring Terminal ends of wires should have enough slack to insure repeated connections. Identity of wires should be positively established by daubs of paint, notching, or by other recognizable means.

Note. Uniform polarity in the system must be maintained.

12. Installation of Left-Hand Workbench Terminal Box (fig. 1).

a. Material Required (Part of Modification Kit, Electronic Equipment MK–345/GR).

Description	Quantity
Condulet body cover, steel, Crouse-Hinds No. 370, or equal.	1
Box, terminal, Barlow No. 7106, or equal	1
Screw, wood, RH, No. 12 x ¾-in. lg	5
Tubing, electrical, metallic steel, galv, 1 in. dia.	90 inches
Condulet, LL, iron, galv, method 1-NPT	1
Conductor, box M1, 1-NPT, male	4
Locknut, conduit, S. galv, 1-NPT	2
Strap, pipe, iron, 1 in. long	1
Terminal, cable, solder, lug (sife formed) No. 4 AWG cable.	2

b. Electrical Tubing.

(1) Prepare a length of 1-inch electrical tubing for connection to the left-hand corner condulet and the left bench terminal box. The box is located 89¼ inches from the front wall of truck body. Install electrical tubing; use two box connectors with locknuts at the box end.

(2) Attach the terminal box to the bench top with four No. 12 (0.216) by ¾-inch-long wood screws.

(3) Fasten the electrical tubing to the bench top approximately 6-inches to the rear of the condulet.

13. Installation of Right-Hand Workbench Terminal (fig. 1).

a. Material Required (Part of Modification Kit, Electronic Equipment MK–345/GR).

Description	Quantity
Condulet body cover, steel, Crouse-Hinds No. 370, or equal.	1
Box, terminal, Barlow No. 7106, or equal	2
Screw, wood, RH, No. 12 x ¾ in. lg	9
Tubing, electrical, metallic, steel, galv, 1-inch diameter.	90 inches
Condulet, LR iron galv, method 1-NPT	1
Connector, box, MI, 1-NPT, male	6
Locknut, conduit, S., galv, 1-NPT	4
Strap, pipe, iron, 1 inch	1
Terminal, cable, solder, lug (side formed) No. 4 AWG cable.	4

b. Electrical Tubing.

(1) Prepare a length of 1-inch diameter electrical tubing to suit the connection of the right corner condulet and the first right-hand bench terminal box. The box is located approximately 42¼ inches from the front wall of the body (fig. 1).

(2) Cut a length of 1-inch diameter electrical tubing suitable for installation of the second right-hand bench terminal box, spaced as shown in figure 1. (Right rear and left boxes should be in alinement.)

(3) Install electrical tubing; use box connectors and locknuts.

(4) Fasten the terminal boxes to the bench top with eight No. 12 (0.216) by ¾-inch long wood screws.

(5) Fasten the electrical tubing to the bench top.

14. Assembly of Protective Covers for Output Terminals of Right-Hand and Left-Hand Power Supplies (fig. 9). *a. Material Required.*

Description	Quantity
Plywood, 78 x 24 x ¾ in. thick	1
Nails, finishing, 3 penny	As required
Cement, Minnesota Mining EC–711, or equal	1 tube
Hinges, butt, steel, 2 x 2 inches, No. 808	4
Screw, wood, steel, fil H, No. 8 x 1 in. lg	8
Screw, wood, steel, RH, No. 8 x ¾-in. lg	4
Screw, tapping, RH, No. 10 x ½ in. lg	4

b. Construct protective covers as shown in figure 9.

15. Assembly of Protective Cover Catches. The only material required is one piece of mild steel, 8 inches by 4 inches, 16 gage. Construct protective cover catches as shown in figure 10.

16. Locating Protective Covers and Protective Cover Catches.

a. Place assembled covers on the truck floor in front of and flush with each end of each power supply so that output terminals are covered. Secure to the floor by using butt hinges and No. 8 by 1-inch long steel wood screws.

b. Secure the cover latches to the power supply, one on each lower front. (Use second screw from the bottom on each side of power supply.)

(1) Turn the protective cover up tight against the power supply, covering the output terminals.

(2) Turn the cover latches in position to hold the cover. Mark the location at each end of the cover for the holding screw. Use No. 8 x ¾-inch long, RH wood screws and screw into locations marked for use in engaging the cover catches and holding the cover in position over the output terminals.

17. Installation of Antenna Assembly. *a.* Assemble the antenna assembly as shown in figure 11.

b. Mount the antenna assembly under the test-instrument shelf as shown in figure 1. Use No. 8 wood screws ⅝-inch long.

18. Installation of Antenna Mast. *a.* The location for the antenna mast is shown in figure 12.

b. Mount the mast bracket according to the drilling layout in figure 12.

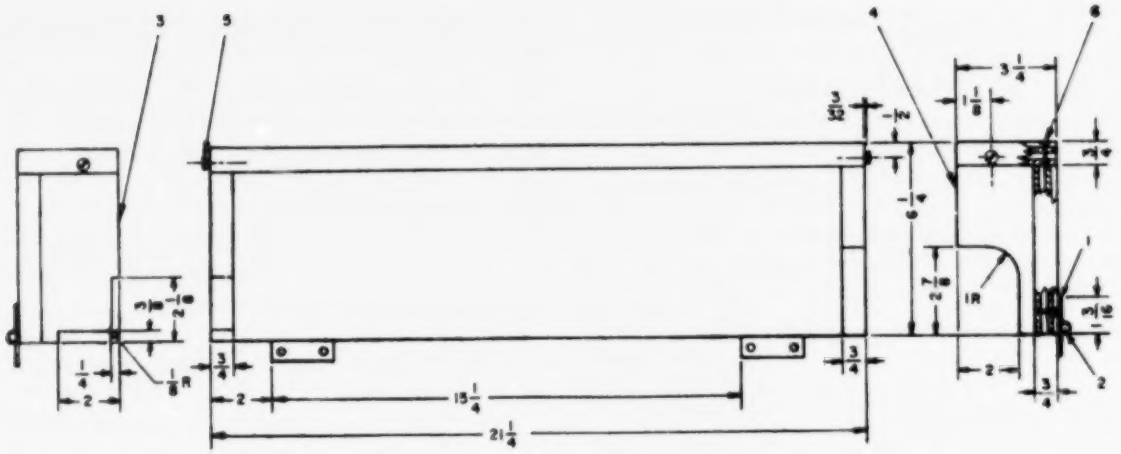
c. Use four hexagonal-head bolts, 5/16–18 NC by 2½ inches long, four lockwashers, and four nuts to fasten the mast bracket to the truck body.

d. Install Mast Base MP–65 (fig. 12) to the mast bracket. Insert Mast sections MS–116, MS–117, and MS–118, consecutively into the mast bracket.

e. Insert the spring clip on Insulator IN–III (fig. 12). From the outside of the truck, install the insulator through the 1⅛-inch diameter hole in the truck body. This hole is alined with the center hole in the mast bracket.

f. Run the cable from the end of the copper tubing of the antenna assembly along the front wall (fig. 1) through Insulator IN–III, and connect it to the binding post of Mast Base MP–65.

19. Tests. Use an ohmmeter to test each electrical circuit for electrical continuity and polarity before turning on 110 volt ac input power.

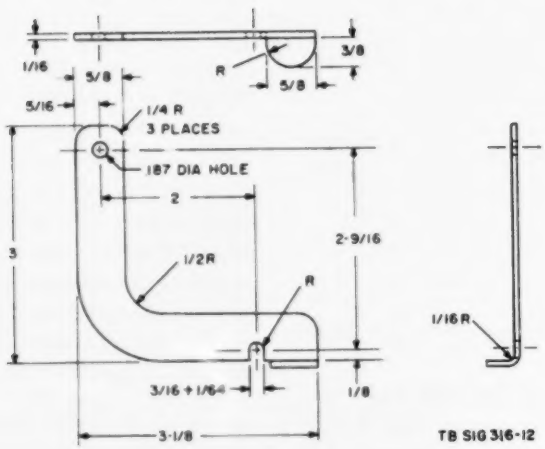


GROUP NO.	DESCRIPTION
I	AS SHOWN
II	OPP. HAND

TB SIG 316-11

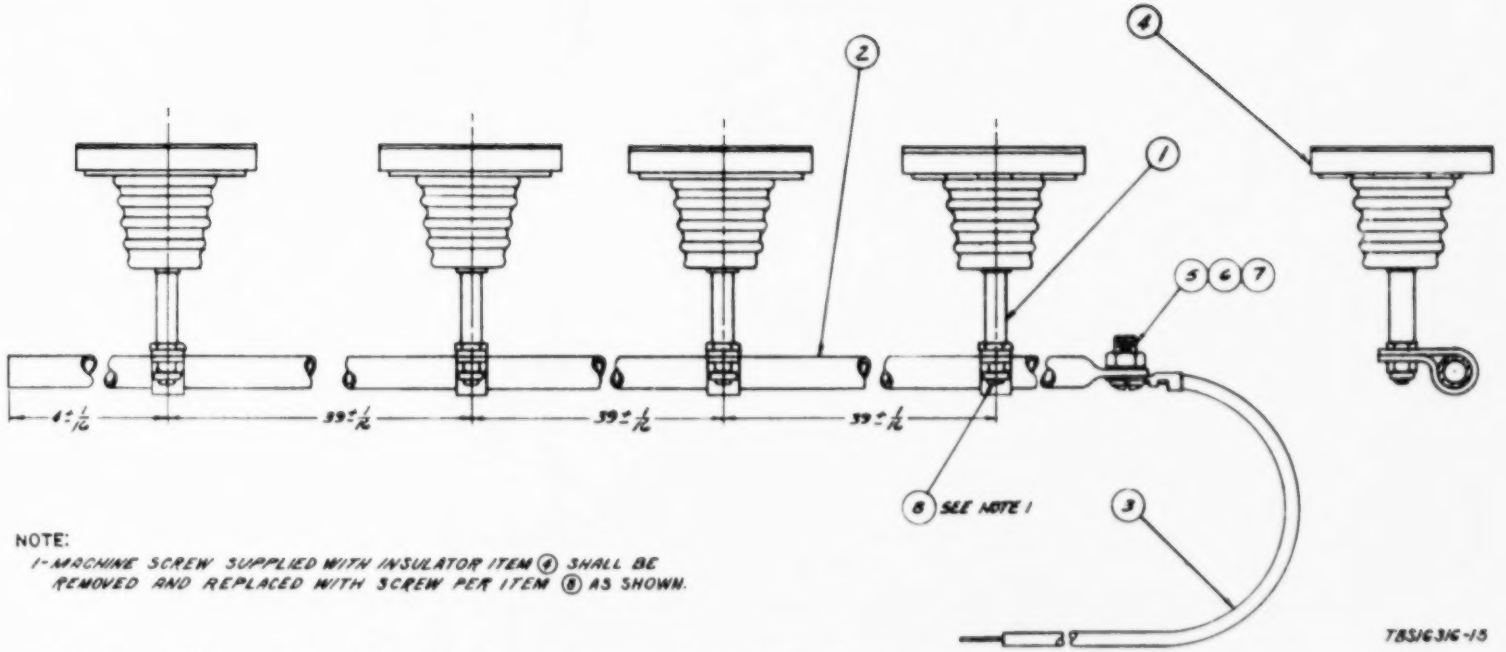
1 Screw, tapping, No. 10 x ½ inch long (4)
2 Hinge, 2 x 2 (2)
3 End (1)
4 End (1)
5 Screw, wood, steel, FH, No. 8 x 1 inch long (2)
6 Nail, finishing, 3 penny (as reqd)

Figure 9. Cover assembly.



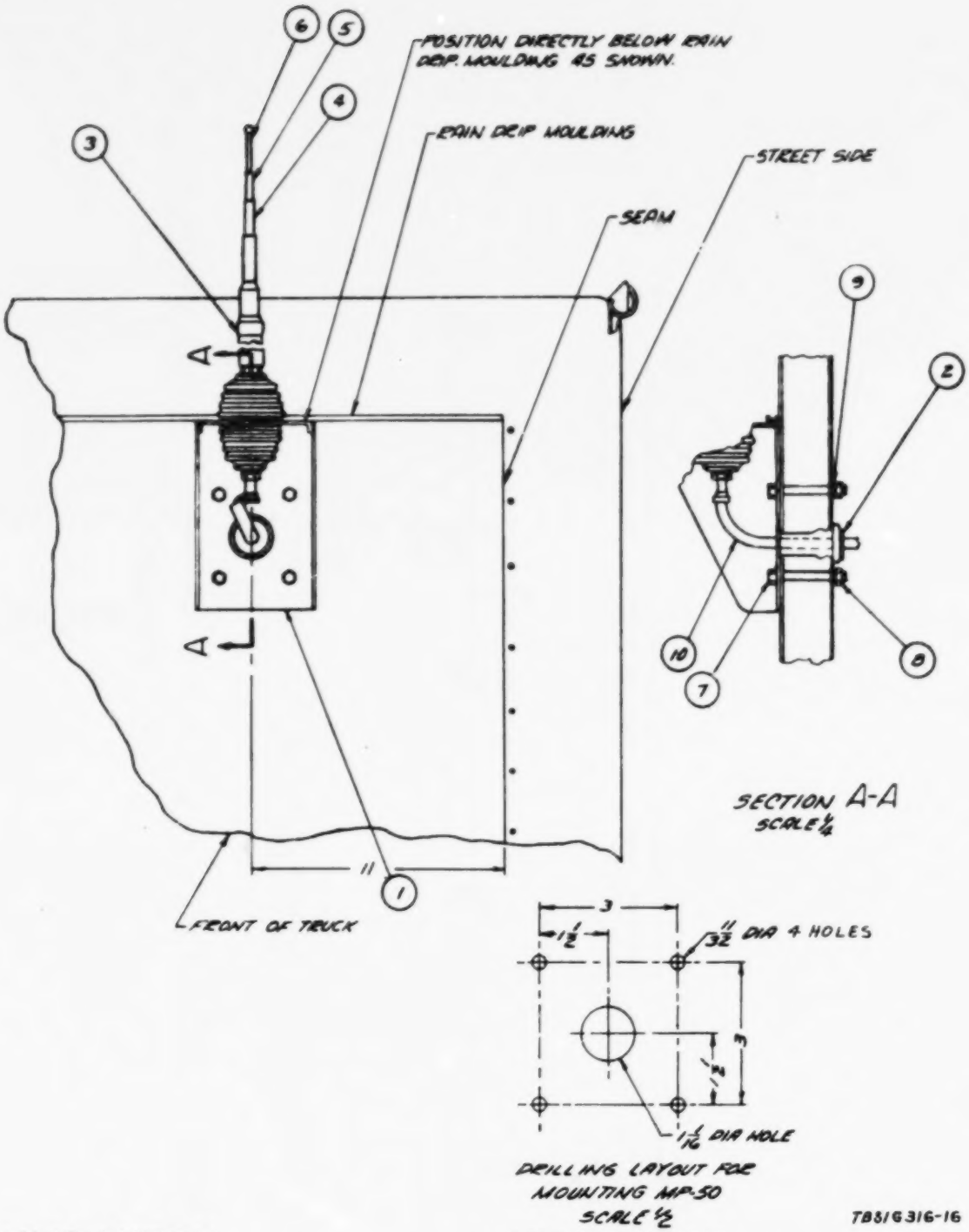
TB SIG 316-12

Figure 10. Latch (for covers).



1 Brass spacer (4)
2 Brass tubing (1)
3 Cable assembly (1)
4 Insulator IN–98 (4)
5 Brass screw, 1/40-20 x ½-inch long (1)
6 Nut, ¼–20, brass (1)
7 Lockwasher, ¼-inch inside diameter, bronze (1)
8 Brass screw, No. 10–32 x 1½ -inch long (4)

Figure 11. Antenna assembly.



1 Mast Bracket MP–50 (1)
2 Insulator IN–111 (1)
3 Mast Section MP–65 (1)
4 Mast Section MS–116 (1)
5 Mast Section MS–117 (1)
6 Mast Section MS–118 (1)
7 Bolt, 5/16–18 NC–2 x 2½-inch long (4)
8 Hexagonal nut, 5/16–18 NC–2, steel (4)
9 Lockwasher, 5/16-inch inside diameter (4)
10 Antenna assembly (1)

Figure 12. Installation of mast and mast bracket.

By Order of *Wilber M. Brucker*, Secretary of the Army:

L. L. LEMNITZER,
General, United States Army,
Chief of Staff.

Official:

R. V. LEE,
Major General, United States Army,
The Adjutant General.

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NG: State AG (3); units—same as Active Army except allowance is one copy to each unit.

USAR: None.

For explanation of abbreviations used, see AR 320–50.

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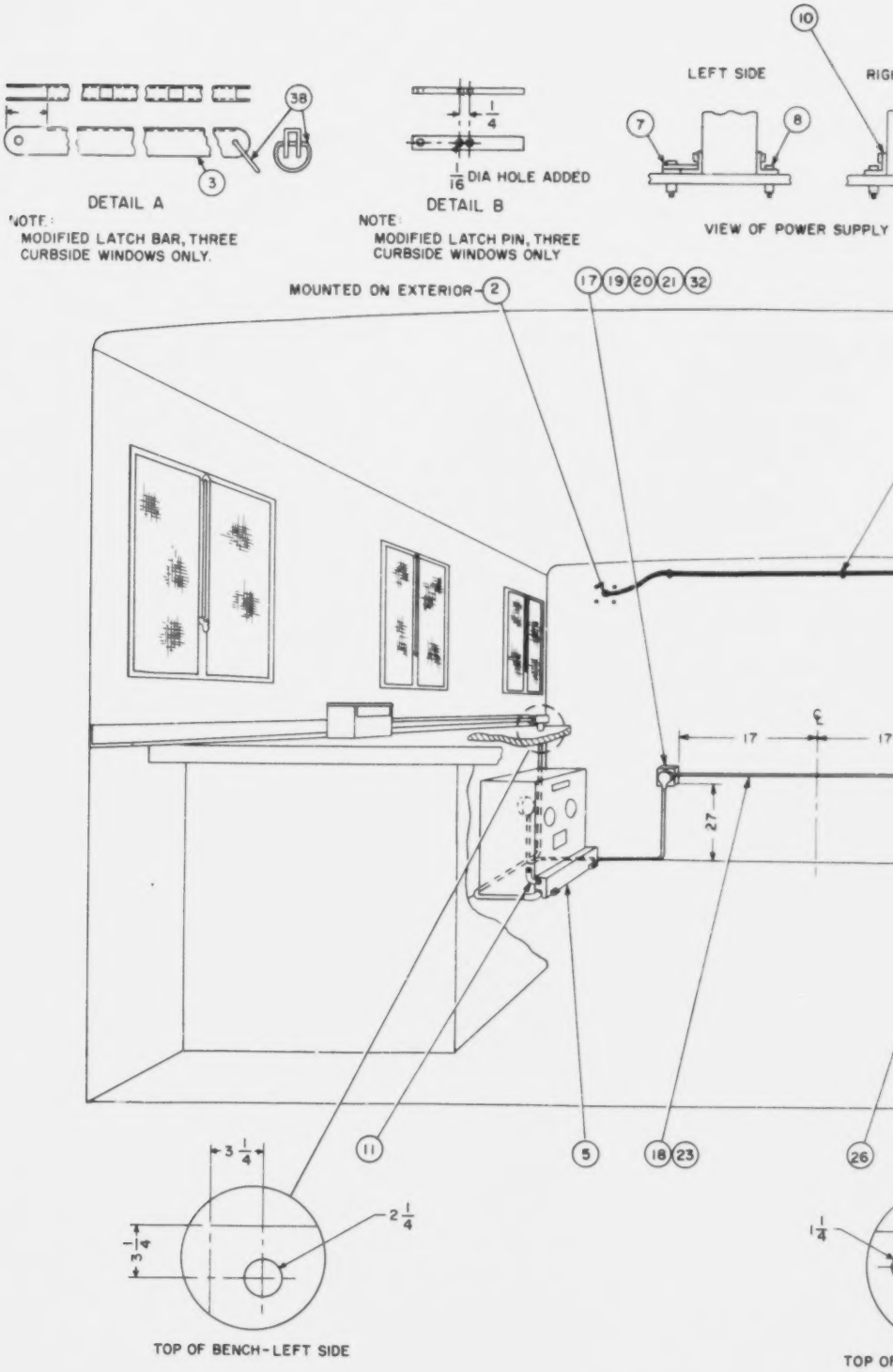


Figure 1. Modification Kit, Electro

1 Shelf assembly (1)
2 Installation of mast bracket (1)
3 Window latch bar (3)
4 Antenna assembly (1)
5 Cover assembly (2)
6 Hexagonal nut, 1/2-20 NF-2 (3)
7 Front angle iron footing (1)
8 Rear angle iron footing (1)
9 Bracket (2)
10 Bracket (2)
11 Latch for covers (4)
12 Lockwasher, 3/8-inch inside diameter (3)
13 Power Supply PP-1104A/G (2)
14 Terminal box (3)
15 Cable clamp (3)
16 Tee nut, 1/4-20 NC-2 (3)
17 Outlet box, steel, galv, 4 inches (2)
18 Connector, 1/2 inch (3)
19 Receptacle, flush range (2)
20 Flush receptacle plate (2)
21 Plaster rings, 4-inch box (2)
22 Lockwasher, 1/4-inch inside diameter (3)
23 Metal electrical tubing, 1/2-inch, 34 inches (1)
24 Flexible conduit, 3/4-inch, 36 inches (1)
25 Connector, 3/4-inch (1)
26 Flexible conduit, 1 inch, 67 inches (2)
27 Connector, right angle, 1-inch flexible conduit (2)
28 Washer, plain, 3/8-inch inside diameter (3)
29 Bolt, 3/8-24 NF-2x3 1/2-inches (3)
30 Bolt, 1/2-20 NF-2x3 1/2 inches (3)
31 Screw machine, 1/4-20 NC-2x7/8 inch long (3)
32 Screw, tapping, RH, steel, No. 8, 1/2-inch long (4)
33 Lug, spade, copper, 3/8-inch hole (4)
34 RH wood screw, No. 8, 5/8-inches long (12)
35 Lockwasher 1/2-inch inside diameter (6)
36 Washer, plain, 1/2-inch inside diameter (9)
37 Screw, sheet-metal, No. 8 x 1 inch long (2)
38 Latch ring (3)

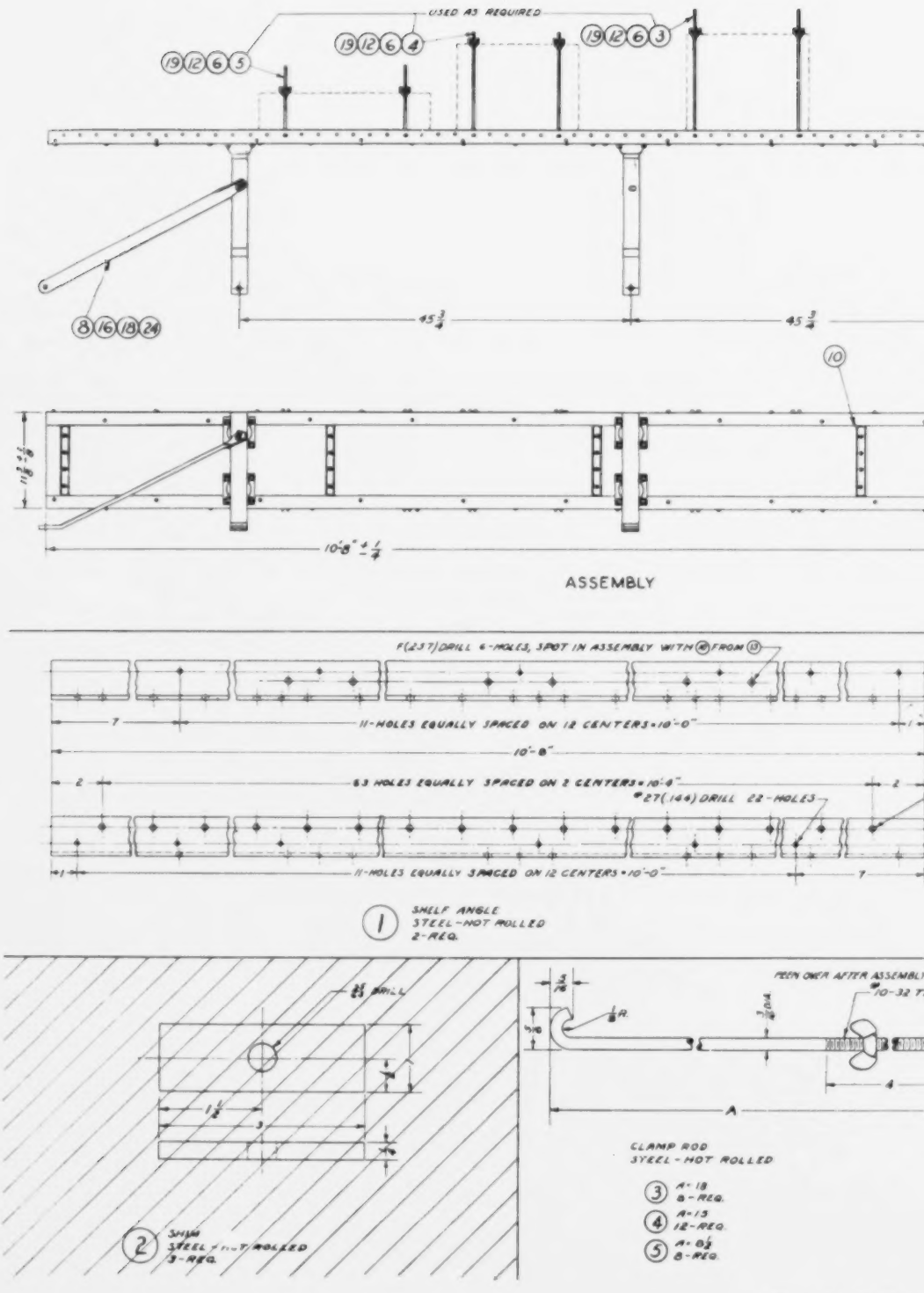
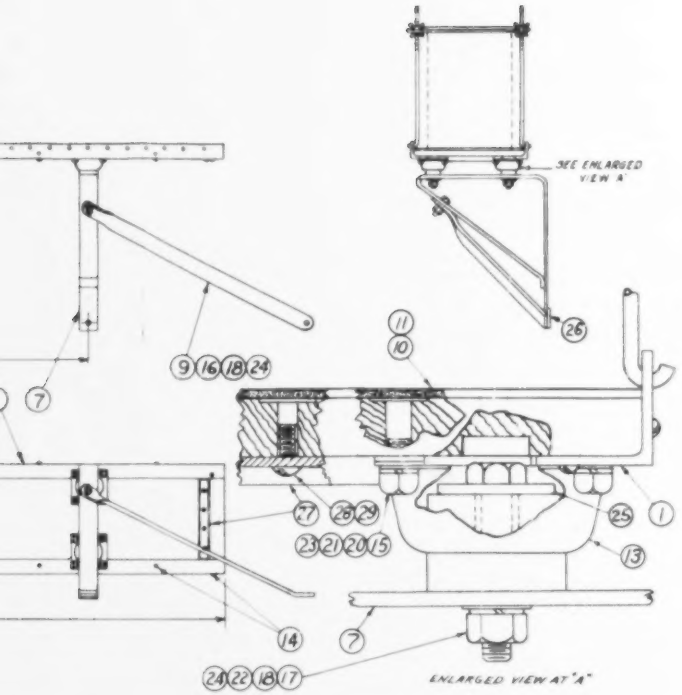
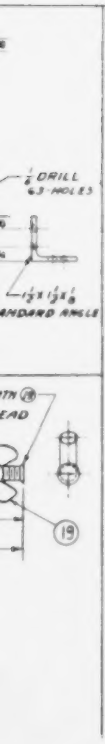
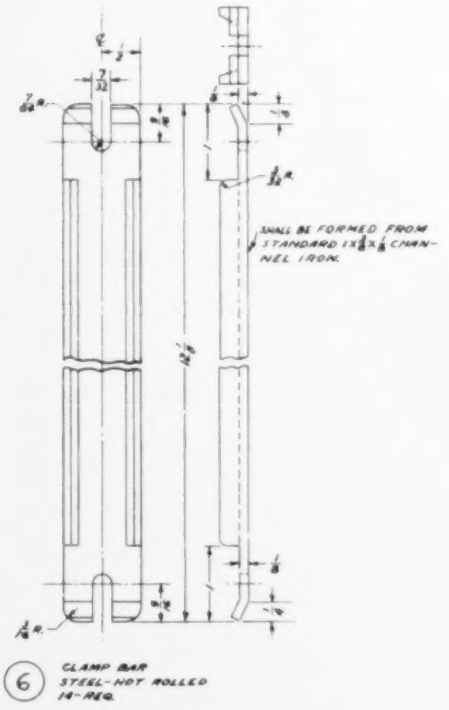


Figure 2. Shelf ass



NOTE:
ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
TOLERANCE SHALL BE ± 1/64 FOR FRACTIONAL DIMENSIONS AND ±.005 FOR DECIMAL DIMENSIONS UNLESS OTHERWISE SPECIFIED.
REMOVE ALL BURRS.
AFTER PAINTING (6) & (10), (11) SHALL BE SECURELY BONDED TO (10), & (12) SHALL BE SECURELY BONDED TO (6) WITH EAGLE BRAND CEMENT #2 AS MADE BY THE FELTERS CO., BOSTON, MASS., OR EQUAL.
(13) SHALL BE SHOCK MOUNT #204-PH-100 AS MADE BY LORD MFG. CO., ERIE, PA., OR EQUAL.
(20) SHALL BE TEENUT #58093; (28) SHALL BE TEENUT #48444, BOTH AS MADE BY UNITED-CARR FASTENER CORP., CAMBRIDGE, MASS., OR EQUAL.
(11) & (12) SHALL BE FELT, TYPE II, CLASS NO. 16 HI PER SPEC C-P-206 MILDEW & MOISTURE RESISTANCE TREATMENT TYPE III IN ACCORDANCE WITH SPEC MIL-M-2312. CONTRACTOR SHALL FURNISH STATEMENT FROM THE MANUFACTURER THAT THE ABOVE TREATMENTS AND TESTS HAVE BEEN MADE ON EACH ORDER.
ALL SURFACES OF (1) & (6) TO (9) INCL, (26) & (27) SHALL BE FINISHED WITH BASIC FINISH NO. P211 OR P213; (10) SHALL BE FINISHED WITH BASIC FINISH NO. P311 OR P312; (3) (4) (5) TO (25) INCL., (28) & (29) SHALL BE FINISHED M227. ALL FINISHES SHALL BE IN ACCORDANCE WITH SPEC MIL-F-14072.



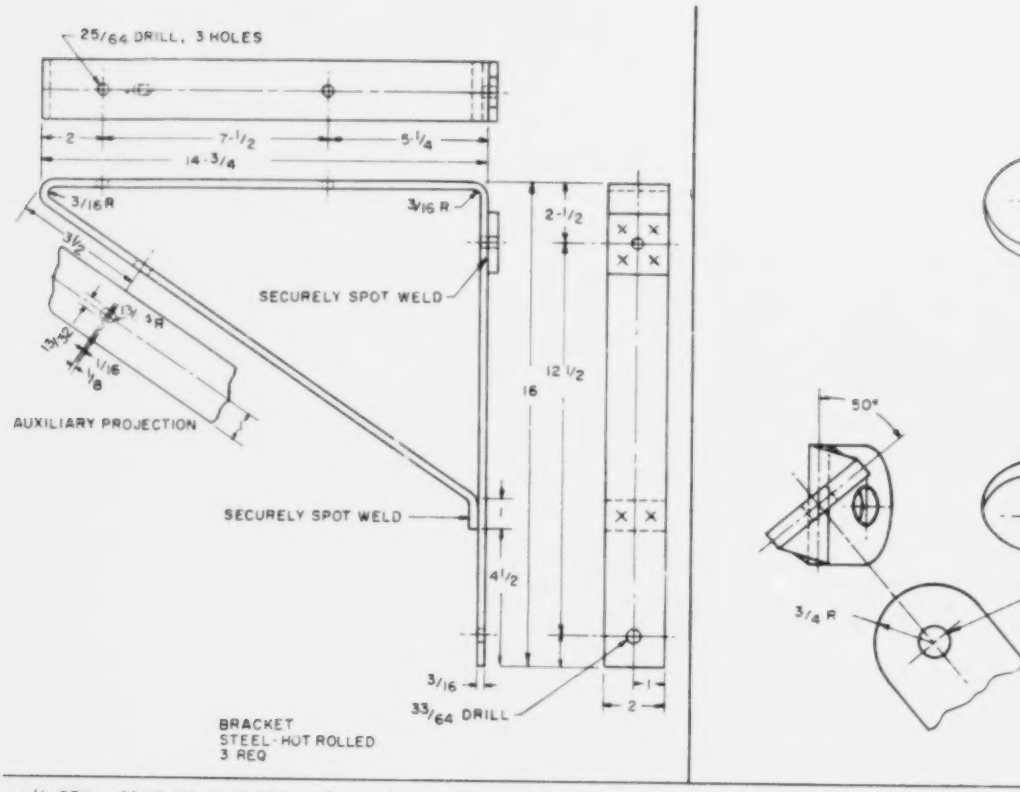


6 CLAMP BAR STEEL-HOT ROLLED 14-REQ.

1 Shelf angle, steel (2)
2 Steel shim (3)
3 Steel clamp rod (8)
4 Steel clamp rod (12)
5 Steel clamp rod (8)
6 Steel clamp bar (14)
7 Steel bracket (3)
8 Steel brace (1)
9 Steel brace (1)
10 Wooden shelf (1)
11 Cover, 11¼ x 10 ft. 8 in. x ⅛ in. thick, felt (1)
12 Felt pad, 1 x 10¾ x ⅛ in. thick (14)
13 Shockmount (6)
14 RH wood screw, No. 6 x ¾ in. long (44)
15 HD capscrew, ¼–20 x ⅞ in. long (24)
16 Hex HD cap screw, ⅜–24 x 1 in. long (2)
17 Hex HD cap screw, ⅜–24 x 2¼ in. long (6)
18 Hex nut, ⅜–24 (8)
19 Wingnut No. 10–32 (56)
20 Tee nut (24)
21 Washer, for ¼–in. diameter screw, steel (24)
22 Washer, for ⅜–in. diameter screw, steel (6)
23 Lockwasher, steel, for ¼-in. diameter screw (24)
24 Lockwasher, steel, for ⅜-in. diameter screw (8)
25 Washer, steel (6)
26 Steel shim (3)
27 Batten, steel (5)
28 Tee nut (20)
29 Steel Rh MS screw, No. 10–32 x ⅞ in. long (20)

TBSIG 316-5

bly.


25/64 DRILL, 3 HOLES
2
7-1/2
5-1/4
14-3/4
3/16 R
3/16 R
2-1/2
3 1/2
SECURELY SPOT WELD
13/32
1/16
1/8
AUXILIARY PROJECTION
12 1/2
16
SECURELY SPOT WELD
4 1/2
3/16
33/64 DRILL
1
2
BRACKET
STEEL - HOT ROLLED
3 REQ
50°
3/4 R

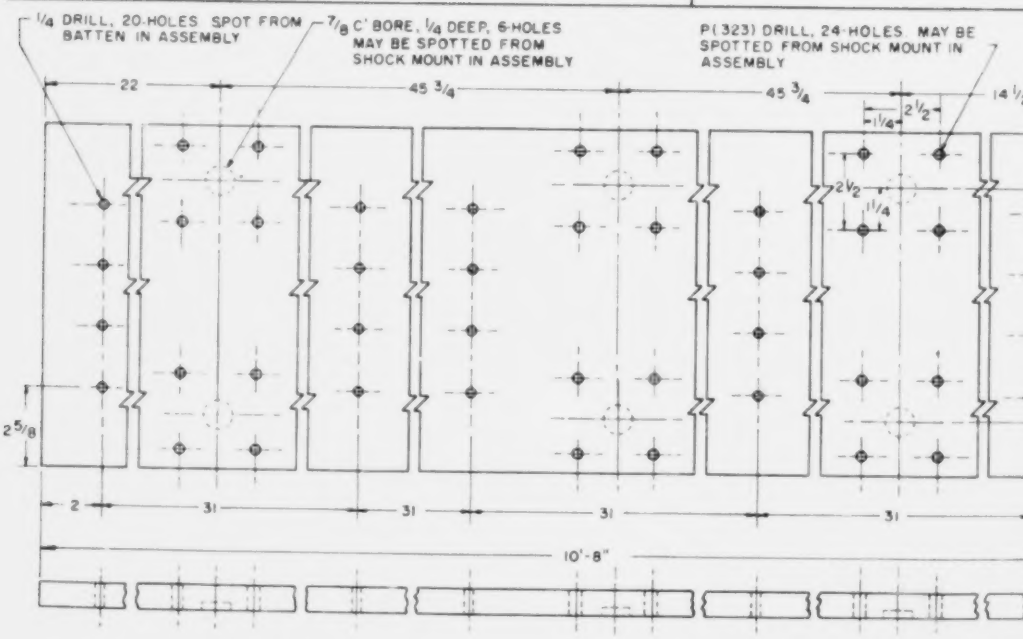
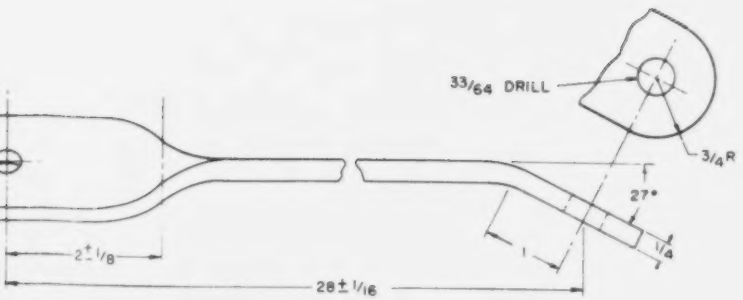
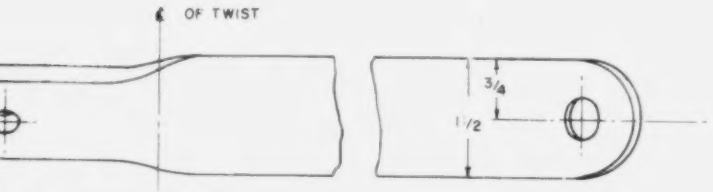

1/4 DRILL, 20-HOLES SPOT FROM BATTEN IN ASSEMBLY
7/8 C' BORE, 1/4 DEEP, 6-HOLES MAY BE SPOTTED FROM SHOCK MOUNT IN ASSEMBLY
P(323) DRILL, 24-HOLES MAY BE SPOTTED FROM SHOCK MOUNT IN ASSEMBLY
22
45 3/4
45 3/4
2 1/2
1 1/4
2 1/2
1 1/4
2 5/8
2
31
31
31
31
10'-8"
SHELF
PINE OR SPRUCE
1-REQ

Figure 3



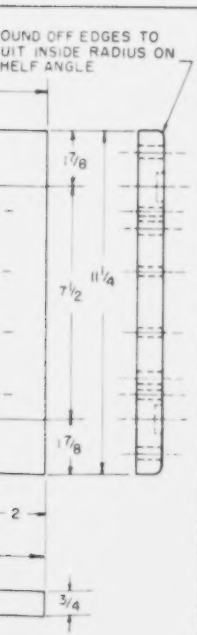


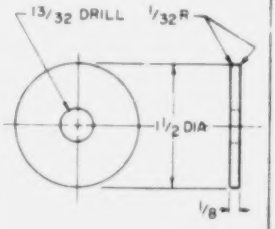
1 RIGHT HAND, REQ

1 LEFT HAND, REQ

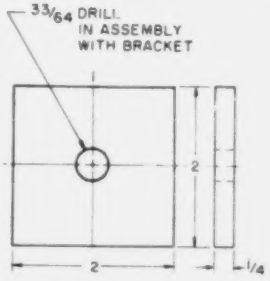
NOTES:

1. ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED
2. TOLERANCE FOR METAL PARTS SHALL BE ± 1/64 FOR FRACTIONAL DIMENSIONS AND ± 005 FOR DECIMAL DIMENSIONS UNLESS OTHERWISE SPECIFIED
3. REMOVE ALL BURRS

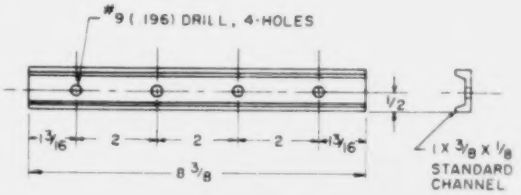




WASHER
STEEL - HOT ROLLED
6-REQ



SHIM
STEEL - HOT ROLLED
3-REQ



BATTEN
STEEL - HOT ROLLED
5-REQ

Shelf details.

PIN : 010725-000